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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,188	10/21/2003	Arti Shukla	10003996-5	3664

7590 07/15/2004

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

VOELTZ, EMANUEL T

ART UNIT	PAPER NUMBER
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2121

DATE MAILED: 07/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/690,188

Applicant(s)

SHUKLA ET AL.

Examiner

Emanuel T. Voeltz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 14-17, 21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14-17, 21 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/21/03
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____



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Examiner's Detailed Office Action

This action is in response to patent application number 10/690,188, filed October 21, 2003.

Claims 1-12, 14-17, 21 and 22 have been examined.

Claims 13 and 18-20 have been cancelled in the preliminary amendment, filed October 21, 2003.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on October 21, 2003 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Double Patenting

Non-Statutory

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double

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patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-12, 14-17, 21 and 22 are rejected under the judicially created doctrine of double patenting over claims 1 and 2 of U. S. Patent No. 6,694,453 B1, granted to Shukla et al. since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows:

As per claim 1,

A method to handle power failures during the performance of a task by a peripheral device, wherein said peripheral device receives electrical power with an "on" state and an "off" state from a power supply, and said peripheral device is part of a data processing system which also contains a non-volatile memory, said method comprising:

monitoring said power supply to determine whether said electrical power is changing from said "on" state to said "off" state, or changing from said "off" state to said "on" state;

if it is determined that said electrical power is changing from said "on" state to said "off" state,

examining a first task queue for said peripheral device to find at least one task for said peripheral device placed in said first task queue before it is

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determined that said electrical power is changing from said "on" state to said "off" state;

calculating the amount of electrical energy required for said at least one task;

performing said at least one task if sufficient electrical energy remains available to said peripheral device to complete said at least one task; and

storing data describing said task in a second task queue in said non-volatile memory if insufficient electrical energy remains available to said peripheral device to complete said at least one task.

See claim 1 of the '453 patent, along with Figures 6 and 7 and beginning at col. 4, line 1 through col. 5, line 30.

As per claim 2,

The method of claim 1, further comprising:

searching in said second task queue in said non-volatile memory for at least one stored task if it is determined that said electrical power is changing from said "off" state to said "on" state; and

if said at least one stored task is in said second task queue,

starting said peripheral device, retrieving said at least one stored task from said second task queue, and

performing said at least one stored task with said peripheral device.

See claim 1 of the '453 patent, along with Figures 6 and 7 and beginning at col. 4, line 1 through col. 5, line 30.

As per claim 3,

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The method of claim 2, further comprising starting said peripheral device if there is no stored task in said second task queue.

See claim 1 of the '453 patent, along with Figures 6 and 7 and beginning at col. 4, line 1 through col. 5, line 30.

As per claim 4,

The method of claim 2, wherein said first task queue and said second task queue are one task queue in said non-volatile memory.

See claim 1 of the '453 patent, along with Figures 6 and 7 and beginning at col. 4, line 1 through col. 5, line 30.

As per claim 5,

The method of claim 1, wherein said non-volatile memory includes a magnetic memory.

See claim 1 of the '453 patent, along with Figures 6 and 7 and beginning at col. 4, line 1 through col. 5, line 30.

As per claim 6,

The method of claim 1, wherein said peripheral device is a printer.

See claim 1 of the '453 patent, along with Figures 6 and 7, col. 3, line 2 and beginning at col. 4, line 1 through col. 5, line 30.

As per claim 7,

The method of claim 1, wherein said peripheral device is an input/output (I/O) device.

See claim 1 of the '453 patent, along with Figures 6 and 7, col. 3, line 2 and beginning at col. 4, line 1 through col. 5, line 30.

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As per claim 8,

A method to handle power failures during the performance of a task by a peripheral device, wherein said peripheral device receives electrical power with an "on" state and an "off" state from a power supply, and said peripheral device is part of a data processing system which also contains a non-volatile memory, said method comprising:

monitoring said power supply to determine whether said electrical power is changing from said "on" state to said "off" state, or changing from said "off" state to said "on" state;

if it is determined that said electrical power is changing from said "on" state to said "off" state,

examining a first task queue for said peripheral device to find at least one task for said peripheral device placed in said first task queue before it is determined that said electrical power is changing from said "on" state to said "off" state,

calculating the amount of electrical energy required for said at least one task,

performing said at least one task if sufficient electrical energy remains in said peripheral device to complete said at least one task, and

storing data describing said task in a second task queue in said non-volatile memory if insufficient electrical energy remains in the peripheral device to complete said at least one task;

if it is determined that said electrical power is changing from said "off" state to said "on" state,

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searching in said second task queue in said non-volatile memory for at least one stored task,

starting said peripheral device, retrieving said at least one stored task from said second task queue, if said at least one stored task is in said second task queue, and

performing said at least one stored task with said peripheral device.

See claim 1 of the '453 patent, along with Figures 6 and 7 and beginning at col. 4, line 1 through col. 5, line 30.

As per claim 9,

The method of claim 8, wherein said first task queue and said second task queue are one task queue in said non-volatile memory.

See claim 1 of the '453 patent, along with Figures 6 and 7 and beginning at col. 4, line 1 through col. 5, line 30.

As per claim 10,

A data processing system that handles power failures when receiving electrical power with an "on" state and an "off" state from a power supply, comprising:

an electrical detection circuit for monitoring said power supply to determine whether said electrical power is changing from said "on" state to said "off" state, or changing from said "off" state to said "on" state;

a peripheral device, including a processor to calculate the amount of electrical energy required for said peripheral device to perform a task;

a first task queue for said peripheral device that can be read to find at least one task for said peripheral device if it is determined that said electrical power is

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changing from said "on" state to said "off" state, said one task having been placed in said first task queue before it is determined that said electrical power is changing from said "on" state to said "off" state; and

a non-volatile memory, including a second task queue for said peripheral device that can store data describing said task if insufficient electrical energy remains available to said peripheral device to complete said at least one task.

See claim 1 of the '453 patent, along with Figures 6 and 7 and beginning at col. 4, line 1 through col. 5, line 30.

As per claim 11,

The data processing system of claim 10, further comprising:

a read/write bus for reading a plurality of entries in said second task queue for at least one stored task, if said electrical power is changing from said "off" state to said "on" state;

a circuit to start said peripheral device and retrieve said at least one stored task from said second task queue, if said at least one stored task is in said second task queue; and

a task scheduler to initiate the performance of said at least one stored task with said peripheral device.

See claim 1 of the '453 patent, along with Figures 6 and 7 and beginning at col. 4, line 1 through col. 5, line 30.

As per claim 12,

The data processing system of claim 10, further comprising an uninterruptible power supply externally connected to said peripheral device.

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See claim 1 of the '453 patent, along with Figures 6 and 7 and beginning at col. 4, line 1 through col. 5, line 30.

As per claim 14,

The data processing system of claim 10, wherein said electrical detection circuit is inside an uninterruptible power supply.

See claim 1 of the '453 patent, along with Figures 6 and 7 and beginning at col. 4, line 1 through col. 5, line 30.

As per claim 15,

The data processing system of claim 10, wherein a processor to calculate said amount of energy required to perform said task is located outside said peripheral device.

See claim 1 of the '453 patent, along with Figures 6 and 7 and beginning at col. 4, line 1 through col. 5, line 30.

As per claim 16,

The data processing system of claim 10, wherein said non-volatile memory includes a magnetic memory.

See claim 1 of the '453 patent, along with Figures 6 and 7 and beginning at col. 4, line 1 through col. 5, line 30.

As per claim 17,

A data processing system, comprising

an uninterruptible power supply,

a peripheral device operatively coupled to the uninterruptible power supply,

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wherein said peripheral device is connected to a circuit to detect a change in electrical power supplied to said uninterruptible power supply;

a non-volatile memory operatively coupled to the peripheral device;

a task queue in said non-volatile memory configured to contain one or more tasks for said peripheral device; and

a processor to calculate the amount of energy required by said peripheral device to perform a scheduled task in said task queue in said non-volatile memory.

See claim 1 of the '453 patent, along with Figures 6 and 7 and beginning at col. 4, line 1 through col. 5, line 30.

As per claim 21,

A method to handle a power interruption to a printer having an uninterruptible power supply; comprising:

the printer receiving an indication that electrical power to the uninterruptible power supply has been interrupted;

printing all print jobs in a print queue associated with the printer for which there is enough power available to print from the uninterruptible power supply; and

saving to a non-volatile memory all print jobs in the print queue for which there is not enough power available to print from the uninterruptible power supply.

See claim 2 of the '453 patent, along with Figures 6 and 7 and beginning at col. 4, line 1 through col. 5, line 30.

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As per claim 22,

A printing system, comprising:

- an uninterruptible power supply;
- a printer operatively connected to the uninterruptible power supply;
- a print queue associated with the printer;
- a detection circuit operatively connected to the printer to detect an interruption in power supplied to the uninterruptible power supply; and
- a processor configured, in the event of an interruption in power supplied to the uninterruptible power supply; to
 - direct the printer to print all print jobs in the print queue for which there is enough power available to print from the uninterruptible power supply; and
 - save to a non-volatile memory all print jobs in the print queue for which there is not enough power available to print from the uninterruptible power supply.

See claim 2 of the '453 patent, along with Figures 6 and 7 and beginning at col. 4, line 1 through col. 5, line 30.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

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Prior Art of Record

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The various patents are cited for showing the general state of the art in computer systems that protect against loss of information in volatile memory during a power failure.

Correspondence Information

Any inquiries concerning this communication or earlier communications from the examiner should be directed to **Emanuel Todd Voeltz** who may be reached via telephone at

(703) 305-4563. The examiner can normally be reached Monday through Friday between the

hours of 8:00 a.m. and 5:00 p.m. eastern standard time.

If you need to send an Official facsimile transmission, please send it to **(703) 872-9306**. If you would like to send a Non-Official (draft) facsimile transmission the fax is **(703) 746-5104**. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's Supervisor, **Anthony Knight**, may be reached at **(703) 308-3179**.

Any response to this office action should be mailed too: **Director of Patents and Trademarks Washington, D.C. 20231**.

Moreover, hand-delivered responses should be delivered to the Receptionist, located on the **fourth floor of Crystal Park 11, 2121 Crystal Drive Arlington, Virginia**.

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United States Department of Commerce
Patent & Trademark Office


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PRIMARY EXAMINER